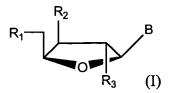
Application No. 10/672,585 Response and Amendment dated July 11, 2006 Reply to Office Action dated January 11, 2006

## Amendments to the Claims

The following listing of claims shall replace all prior versions, or listings of claims in this application.

## Listing of Claims:

1. (Currently Amended) A method for the preparation of 2'- or 3'-deoxy- and 2',3'-dideoxy-β-L-pentofuranonucleoside compounds of formula I:



## in which

- B represents purine or pyrimidine base;
- R<sub>1</sub> represents OH;
- R<sub>2</sub> and R<sub>3</sub> represent, independently of each other, H or OH; and
- at least one of R<sub>2</sub> and R<sub>3</sub> represents H;

characterized in that the following steps are carried out:

1) a compound of formula (II) is condensed with the base B in order to obtain the compound of formula (III) according to the scheme

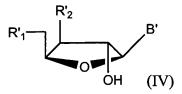
$$R'_1$$
 $R'_2$ 
 $R'_1$ 
 $R'_3$ 
 $R'_3$ 

in which formulae (II) and (III):

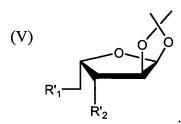
- R'<sub>1</sub> and R'<sub>2</sub> have the meanings given for R<sub>1</sub> and R<sub>2</sub> except that when R<sub>1</sub> and R<sub>2</sub> represent OH, the OH group is protected by a protecting group such as selected from the group consisting of an acyl, a benzyl or a silyl group,
- R'<sub>3</sub> represents a C<sub>1</sub> to C<sub>5</sub> alkyl group or a phenyl radical, which are optionally substituted;
- X is a leaving group such as Cl, Br, I or a C<sub>1</sub> to C<sub>5</sub> acyloxy or alkoxy group,
- B' is a purine or pyrimidine base B which is optionally appropriately protected,

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2) the R'<sub>3</sub>COO group at the 2' position is removed by deacetylation so as to obtain an OH group and a compound of formula



- 3) optionally, the OH group at the 2' position is removed by a deoxygenation reaction; and
- 4) where appropriate, the R'<sub>1</sub> and R'<sub>2</sub> groups and the B' base are deprotected so as to obtain the compounds of formula (I).
- 2. (Previously Presented) The method according to Claim 1, characterized in that in the compounds (II) and (III), R'<sub>3</sub> represents a C<sub>1</sub> to C<sub>5</sub> alkyl group.
- 3. (Currently Amended) The method according to Claims 1 or 2, <u>further comprising</u> <u>preparing characterized in that</u> the compound (II), in which X and R'<sub>3</sub>COO represent an Oacetyl group, is <u>prepared</u> by acetolysis of a 1,2-isopropylid-ene-L-xylofuranose compound of formula (V)



- 4. (Currently Amended) The method according to Claim 1, characterized in that R'<sub>2</sub> and R'<sub>3</sub>COO are different, in particular R'<sub>2</sub> is an O-benzoyl group and R'<sub>3</sub> is an alkyl group.
- 5. (Previously Presented) The method according to Claim 1, characterized in that the compounds of formula (I) are prepared in which R<sub>2</sub> and R<sub>3</sub> represent H or OH.
- 6. (Previously Presented) The method according to Claim 1, characterized in that the B represents one of the adenine, guanine, hypoxanthine, uracil, thymine or cytosine bases, wherein these bases may be substituted by a halogen at the 5 position for cytosine and uracil.
  - 7. (Currently Amended) The method according to claim 1 for the preparation of a compound of formula (I) in which B is cytosine, further comprising a step wherein characterized in that a compound in which B is uracil is converted to a compound of Formula I in which B is cytosine by converting uracil to cytosine.

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8. (Currently Amended) A stereoisomeric β-L-pentofuranonucleoside compound[[s]] corresponding to the following formula

$$R_1$$
 $R_3$ 
 $R_3$ 
 $R_3$ 
 $R_3$ 
 $R_3$ 
 $R_3$ 
 $R_3$ 
 $R_3$ 
 $R_3$ 

in which

- B has the meaning given in one of Claims 1 and 6 represents one of the uracil, thymine or cytosine bases, wherein these bases may be substituted by a halogen at the 5 position for cytosine and uracil, R<sub>1</sub> represents OH and,
  - either R<sub>2</sub> represents OH and R<sub>3</sub> represents H,
  - or R<sub>2</sub> represents H and R<sub>3</sub> represents OH.
- 9. (Currently Amended) The compound according to Claim 78, characterized in that wherein B represents uracil, 5-fluorouracil, hypoxanthine, cytosine or 5-fluorocytosine, guanine or adenine.
- 10 16. (Canceled)
- 17. (Previously Presented) The method according to Claim 1, characterized in that in the compounds (II) and (III), R'<sub>3</sub> represents CH<sub>3</sub>.